SURGERY.

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THE VALUE OF INTERNAL MEDICATION IN THE TREATMENT OF MALIGNANT DISEASE.

IN discussing the treatment of malignant disease by internal medication, WRIGHT (*Annals of Surgery*, April, 1893) does not uphold this method to the exclusion of surgical interference, but rather advises its use in preparation for and in conjunction with the most thorough extirpation by the knife. For the purpose of destroying outlying foci of disease left by the knife, he tried various drugs internally, and in cases that he had operated upon, as well as in those in which operation was impossible, he began to give the bromide of arsenic in one-fortieth to one-tenth grain doses after meals, and the carbonate of lime before meals in five to ten-grain doses in the tincture of calumba. In many cases coming under the head of sarcoma, there was quite a rapid tendency toward cure, and this was generally permanent. Large deposits, as a rule, would not yield, but excision of the enlargement was often followed by a sure cure. As to cases affecting bone, osteo-sarcoma, the treatment was not so favorable, but seemed of some value. He advises practitioners to give the bromide of arsenic to all patients as soon as they come under their care, and continue the remedy for a long time after operation. In a considerable number of cases operated upon for cancer in the past three, four, and five years, to whom the bromide of arsenic was administered for a time, say six or twelve months, complete health has been restored and the scar tissue is now in every way just as normal as it would be if the wound had been in perfectly healthy tissue. In no case did the microscopic examination fail to confirm the diagnosis. The same results might possibly have been obtained by complete and thorough operation, and yet he believes there is value in the after-treatment, and that a case would be neglected without it. In inoperable cases he has seen good results, not the removal of the growth, but relief of pain and a retardation of the growth. In some cases of cancer of the intestines he has seen the bromide of arsenic bring relief and prolongation of life.

THE USE AND PLACE OF CAUSTICS IN THE TREATMENT OF CANCER.

LEWIS (*Annals of Surgery*, 1893), in discussing the use of caustics, agrees with the principle of Walshe, who said: "Escharotic agents should be applied in such a manner as to produce the requisite effect, if possible, by a single application, otherwise the irritation gives, not necessarily but commonly, new activity to the disease." The dangers of mild cauterization are only too frequently seen. Caustics in operable cases, as cancer of the breast, should never be preferred to the knife. Caustics should not be used in cases involving any mucous surface. In cutaneous cancer the author finds a field for the use of caustics. He says: "The disease can be thoroughly destroyed by caustic applications, which act sufficiently upon the diseased tissues without destroying the healthy skin." "The resulting cicatrix, when the deep subcutaneous tissues are not involved, is a smooth, white, and in every way healthy one, and far less conspicuous than those remaining after operation." The only exceptions he finds in cases involving the mucous surfaces of the lips or eyelids or a large surface. If the disease is a small, warty growth, he advises the use of Jennings' potash and cocaine paste. The formula is as follows:

R.—Hydrochlorate of cocaine	2	parts.
Caustic potash	12	"
Vaseline	6	"

Acetic acid must be at hand to limit its action as soon as desired. He has used in over one hundred cases a paste recommended by Marsden, composed of arsenous acid, two parts, and mucilage of acacia, one part, mixed into a paste too thick to run. It is not to be used in cancers more than four square inches in area, and is to be applied to only one square inch at a time. It should be covered with absorbent cotton to absorb superfluous paste, and left on till some swelling of inflammatory character appears around the border of the plaster, when it is removed. From one to three days are required to produce the desired effect; then warm poultices are applied to remove the slough, and a healthy ulcer follows, which heals rapidly. Bougard's paste, which is less painful, is used in a similar manner, but can be applied to a larger surface, and kept prepared in a covered jar. The skin surface must be removed with caustic potash in both cases. Bougard's formula is as follows:

R.—Wheat flour	60	grammes.
Starch	60	"
Arsenic	1	"
Cinnabar	5	"
Sal ammoniac	5	"
Corrosive sublimate	0.50	centigramme.
Solution of chloride of zinc at 52° F.	245	grammes.

The Domain of the Knife in the Treatment of Carcinoma.

Jacobson (*Annals of Surgery*, 1893) believes that in the knife we have the only means of dealing with cancer, and to be effectual the operation must be extensive, thorough, and painstaking; all diseased tissues, and every suspected portion of tissue must be removed, and every lymphatic that communicates with the diseased area, whether infected or not. The present status of belief in this regard is not that such a radical removal is best, but that it must be done, and is indicated in every operation no matter how small the area of infection may be. In breast operations the axilla must always be thoroughly cleared of all glands and fat; if the glands show evidence of infection, great care should be taken to remove all vestiges of the disease; the danger of leaving foci on the pectoral fascia is great, and all the fat should be carefully removed, while some authors go so far as to advise the removal of a layer of the pectoral muscles. Thorough removal is preferable to immediate union and complete coaptation. In cancer of the uterus the difficulties are greater and recurrences more frequent, but the more radical and complete the operation the greater are the patient's chances, provided an operative recovery is not endangered. Methods are still unperfected, but with improved technique in operating the author believes that the knife will remain in the future, as it is now, the best means of treatment at our command. Early diagnosis and operation are important factors in reducing the mortality. In conclusion the author says: "I may be permitted to reiterate that recent study of cancer only emphasizes its infectious character and primarily local origin. To effect its cure we must be able to reach beyond the infected area into healthy structure. To accomplish this with reasonable certainty the surgeon has but one agent—the knife."

A NEW INDICATION FOR PERINEAL URETHROSTOMY; EXTENSIVE DESTRUCTION OF THE URETHRA.

PONCET (*Gaz. hebd. de Méd. et de Chir.*, 1893) reports a case of extensive laceration of the urethra in which he deemed it necessary to make a perineal section in order to drain the bladder and prevent urinary infiltration, infection, and consequent sloughing. The patient passed into his urethra a large cord, using a twisting motion in order to make it enter. This peculiar motion had the effect of tying a knot in the cord at a point either within the bladder or in the prostatic urethra. When the patient found himself unable to withdraw the cord he cut it off close to the glans, the end slipping back within the urethra. It remained in this position, the patient urinating around it, for two weeks, and seemingly produced no distress or pain until the end of that time, when the patient came into the hospital with an enlarged and inflamed organ. The cord was extracted with difficulty with urethral forceps, but the subsequent inflammation was so intense that a perineal urethrostomy was necessary. The patient recovered, but the urethra had been so effectually destroyed that it was impossible to re-establish its function.

A CASE OF PERINEAL LITHOTRITY.

BANGS (*Annals of Surgery*, 1893) reports a case in which he performed supra-pubic cystotomy, removing a stone weighing 400 grains, and two protruding portions of the lateral lobes of the prostate. Siphon drainage was employed in the usual manner. The patient recovered, but had little control over the bladder. Urination was painful, frequent, and complete evacuation was impossible except by the use of the catheter, and at his best he was compelled to urinate every two hours. This condition continued for two years; treatment by rest and washing out the bladder affording some relief. Finally, after an aggravated attack, a stone was found, and incrustations on the anterior bladder wall. The author decided to perform perineal lithotrity, or Dolbeau's operation. By means of a staff and the use of Dolbeau's dilator a canal of from one to one and a half inches was tunnelled through the perineum and prostate, the lithotrite introduced, and the stone crushed and removed. A drainage-tube was introduced, the wound packed with iodoform gauze, and siphon drainage maintained for four weeks, when the tube was removed, and the wound healed in eleven days. The expulsive power of the bladder was quickly regained, and the patient urinated standing. The interval varied from four to six hours, and at night seven to nine hours. The author believes the improved condition to be due to the great dilatation of the prostatic urethra.

THE RADICAL CURE OF HERNIA BY BONE PLATES.

THIRIAR (*Le Merc. Méd.*, 1893) describes a new method for performing this operation, which he has used successfully in twenty-five cases. It consists in the interposition of a decalcified bone plate, larger than the internal ring, between the abdominal parietes and the peritoneum which has been dissected up from the inner surface, around the stump of the previously ligated hernial sac. The bone plate is held in position by sutures that are so placed as to approximate the different layers of the abdominal wall. In the twenty-five cases which the author operated upon he has seen no relapses and no failures, and the cases upon which it has been tested have been the most unfavorable ones which have come under his care; in some cases relapse had occurred after other attempts at radical cure; in others the herniæ were very large, and the abdominal opening would admit three or four fingers, while the tissues were weak and relaxed. The part that the author ascribed to the bone plates is that of a structure upon which the leucocytes could build up a dense mass of connective tissue following gradually as the bone plate was absorbed. This he was able to prove by microscopical examinations of pieces that were thrown out of the wound unabsorbed. The production of this thick mass of cicatricial tissue produces a plug that does not yield to pressure. The bones used by the author were the shoulder-blade or any of the large bones of the beef or porker. They should be taken as the animal is killed, denuded of their periosteum, without injury to the bone substance, and plunged into a 10 per cent. solution of hydrochloric acid. The amount used should be ten times the volume of the bones, and should be renewed every two days. The action is more rapid if the bones are cut into small pieces; they are sufficiently decalcified when soft and pliable under water, without the production of bubbles. The marrow of long bones can be removed the second or third day. It is then placed in a 1 : 1000 bichloride solution for two days, and finally preserved in an ethereal solution of iodoform, but must be dehydrated in 95 per cent. alcohol previously.

LOOSE BODIES IN THE KNEE-JOINT.

RICHARDSON contributes (*Boston Medical and Surgical Journal*, 1893, No. 21) some valuable suggestions on this subject. As is well known, opening of the knee-joint has always been attended with considerable risk. Under Listerian methods this risk has been very much reduced, but it undoubtedly still exists, as cases which have been operated on with the most careful attention to antiseptic detail have occasionally resulted in the destruction of the joint, and even in death from septicæmia. The annoyance caused by foreign bodies in the knee-joint is so considerable in many cases that operation seems demanded.

Attention to the following recommendations of the author will no doubt render this operation as free from danger as other surgical procedures of like magnitude. Every detail of asepsis is to be carefully carried out. It is advised to open the supra-patellar pouch external to and above the patella. If possible, the loose body is to be grasped between the thumb and forefinger of the left hand, and thus held while the incision is being made. Before opening the synovial membrane, all bleeding-points must be secured with pressure forceps. The hands of the operator and of his assistant should not come in contact with the wound. The cut surface is kept dry with *dry* sterilized gauze held in forceps. The flaps are kept retracted with vulsellum hooks. Having dried the wound, the synovial membrane is cut through, the foreign body grasped with forceps and withdrawn. Avoid digital exploration, and do not irrigate the joint, unless there has been a large effusion present.

The author prefers to close the wound with silver wire armed with a needle at either end, so that the punctures through the skin may be from within out. The wound is sealed with iodoform collodion; a posterior splint and antiseptic gauze and cotton are applied with gentle pressure.

Four cases are reported in which the result of the operation was satisfactory.

SEPARATION OF THE LOWER FEMORAL EPIPHYSIS.

MAYO ROBSON reports (*Annals of Surgery*, 1893, No. 1) three cases of this accident coming under his care. Attention is called to the fallacy of considering these injuries as equivalent to transverse fractures of the lower end of the shaft of the femur, and of treating them as such, as is recommended in most text-books.

In two of the cases reported the separated epiphysis was dislocated forward, the lower end of the diaphysis projecting in the popliteal space; the affected limb was shortened. In the third case the separation was incomplete. The deformity in this case was but slight, save the swelling of the joint, and the affected limb was somewhat longer than its fellow, measured from the anterior superior spine of the ilium to the lower border of the patella. In three other cases observed by the author the dislocation was forward in each instance.

Reduction is to be accomplished, under anæsthesia, by extension, counter-extension, and manipulating the epiphysis into position. For retention, the posterior splint, the double inclined plane, or the long splint, with weight and pulley, may be employed.

In the cases recorded a perfect recovery took place in every instance, without any impairment of function.

Nearly all of the reported cases have been caused by direct violence. The direction of the displacement will be determined, at least in part, by the direction in which the violence has been applied, and also upon the attachment, or otherwise, of the gastrocnemius tendon to the lower end of the upper fragment.

The diagnosis in most cases is not difficult. Shortening of from one to two inches, the projection of the lower end of the diaphysis in the popliteal space, the displacement of the epiphysis on the front of the femur, and the interference with the circulation of the leg, when taken together with the cause of the injury and the age of the patient, form, according to the author, a group of symptoms pathognomonic of the injury under consideration.

If reduction is impossible, excision may be resorted to; while, if the great vessels have been ruptured, or gangrene has occurred, amputation must be performed.

IODOFORM IN THE TREATMENT OF TUBERCULOSIS OF BONES AND JOINTS.

BRODNITZ claimed (*Deutsche Zeitschr. f. Chirurgie*, Bd. xxxv., Hefte 5 u. 6) that the results of operative treatment of bone and joint tuberculosis have considerably improved since the employment of iodoform has been practised. **KÖNIG** explains this by assuming that tuberculosis cannot develop in quickly contracting scar tissue. Mosetig v. Moorhof attributes a specific effect to the iodoform.

For the past three years the author has used iodoform, as recommended by Billroth, which consists of a sterilized 10 per cent. mixture with glycerin. The absolute sterilization of the mixture is of the utmost importance.

The author reports 20 cases of cold abscess subjected to this treatment. Of these 9 were cured, 8 had fistulæ remaining, and 3 were unheard from. Of 25 cases of bone tuberculosis operated upon, and the iodoform-glycerin mixture employed in addition, 20 were discharged cured. Nine cases of capsular tuberculosis were subjected to arthrectomy and the use of iodoform, and 7 were definitely cured.

DE VOS has written an exhaustive monograph on this subject (*Centralblatt für Chirurgie*, 1893, No. 3). He prefers the iodoform mixed with olive oil, and carefully sterilized. It is used in exactly the smae manner as the iodoform-glycerin mixture.

Seventy-two cases are reported, which have been subjected to this treatment; 72 per cent. of these are said to be entirely cured. The duration of the treatment in the different cases was from 9 to 325 days. The number of injections ranged from one to twenty. The amount of iodoform used was from 2 to 67.5 grammes, and of oil, 10 to 385 grammes.

Improvement is shown, after beginning this treatment, by decrease of the pain and of the swelling; and new connective tissue results at the seat of the injections. This latter is said to have been observed in a patient whose knee-joint was resected after having undergone the iodoform treatment.